



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/733,299	12/08/2000	Edgar E. Blanco	0220-074	2989
52270 7590 10/31/2007 POTOMAC PATENT GROUP PLLC P.O. BOX 270 FREDERICKSBURG, VA 22404			EXAMINER JARRETT, SCOTT L	
			ART UNIT 3623	PAPER NUMBER
			MAIL DATE 10/31/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 09/733,299	Applicant(s) BLANCO, EDGAR E.	
	Examiner Scott L. Jarrett	Art Unit 3623	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 August 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 and 12-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10 and 12-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date: _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on August 14, 2007 has been entered.

Applicant's amendment amended claims 1-10 and 21-21 and canceled claim 11. Currently Claims 1-10 and 12-21 are pending.

Response to Amendment

2. The 35 U.S.C. 101 rejection of claims 1-10 and 12-21 is withdrawn in response to Applicant's amendments to claims 1-10 and 12-21.

Response to Arguments

3. Applicant's arguments with respect to claims 1-10 and 11-21 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claim 21 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding Claim 21, Claim 21 recites the limitation "~~the~~ accumulated knowledge" in Claim 21. There is insufficient antecedent basis for this limitation in the claim.

Examiner interpreted the claim to read that the requirements table/knowledge contained therein is viewed by personnel.

Appropriate correction is required.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1-10 and 12-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Puckett et al., Cradle-to-Grave Material Management (1991).

Regarding Claims 1, 5-10, 12-21 Puckett et al. teach a system and method (tool) for forecasting items for a project (predicting, determining, calculating future item need/requirements) comprising (Column 1, Paragraph 1, Page 1; Column 2, Last Two Paragraphs, Page 1):

- tables for predicting (estimating, calculating, determining, etc.) future demand (need, requirement, etc.) for quantifiable items (materials, supplies, personnel, resources, parts, components, etc.) in connection with a plurality of projects the tables comprising (Column 2, Last Two Paragraphs, Page 1; Column 1, Paragraphs 1-2, Page 4; Column 2, Page 5; Figures 1, 6-7; Table 1):

- a project table having project information for each project and including a reference (link, association, relationship, etc.) to items employed in connection with a project (Figures 1, 6-7; Table 1);

- an item (materials, supplies, personnel, resources, parts, components, etc.) table having item information referenced by the project table and including a reference

Art Unit: 3623

to an algorithm (equation, formula, expression, calculation, etc.; e.g. Bill of Materials stored in the database, items list; Column 1, Paragraphs 2-3, Page 2) to determine a quantity of an item for a particular project (Column 2, Paragraph 1, Page 6; Figures 1, 3-5; Table 1); and

- a algorithm table having algorithm information for each algorithm referenced by the item table (Bill of Materials, Items List, etc.; Column 1, Paragraphs 2-3, Page 2; Figures 1, 6-7; Table 1);

- populating, by the forecasting tool (i.e. by the system/method), a requirements table with information obtained for the tables in response to a modifiable query for item demands wherein the forecasting tool traverses the tables according to the query to accumulate the data necessary to populate the requirements table (Figures 1-4, 6-7; Table 1); and

- outputting, by the forecasting tool, the requirements table for viewing by personnel (Figures 3-7);

- a milestone table having milestone information, wherein the project information further including at least one milestone date for the project including at least one key project moment to which a need for an item for the project is referenced and each milestone date referenced by the project table (Column 1, Paragraph 1, Page 1; Column 1, Paragraphs 1-4, Page 2; Column 2, Paragraph 4, Page 2; Figures 2-4);

- the item information further including a reference to the milestone information in the milestone table and information on how to calculate a date when the item is

Art Unit: 3623

required based on the milestone information (Column 1, Paragraphs 1-2, 4, Page 2; Column 2, Paragraphs 2-4, Page 2);

- a supplier table having supplier information for each supplier references by the item table the supplier information including the items supplied by the supplier and information of the items supplied wherein the item information includes an identification of at least one supplier (Column 2, Last Paragraph, Page 1; Column 1, Paragraph 1, Page 2; Column 1, Paragraph 1, Page 6; Figure 2; Table 1);

- calculating an order date based on lead-time information, obtained from the supplier table, and the requirement date (e.g. applying the actual milestone date to calculate the date on which the item is required; Column 2, Last Paragraph, Page 1; Column 1, Paragraphs 2, 4, Page 2; Column 2, Paragraph 3, Page 3; Figures 3-4);

- the requirements table being populated with information including a project, item for the project, an amount of the item required for the project based on inputs the algorithm (BOM, items list, etc.), date when the item is needed for the project, the date when the item must be ordered to satisfy the date when the item is needed and the supplier the item is to be ordered from wherein the requirements table data/information is based on the information in the other tables and is viewed by personnel (Column 1, Paragraph 1, Page 1; Column 2, Last Paragraph, Page 1; Column 1, Paragraphs 1-4, Page 2; Column 2, Paragraphs 1-4, Page 2; Column 2, Paragraph 3, Page 3; Figures 1, 3-7; Table 1).

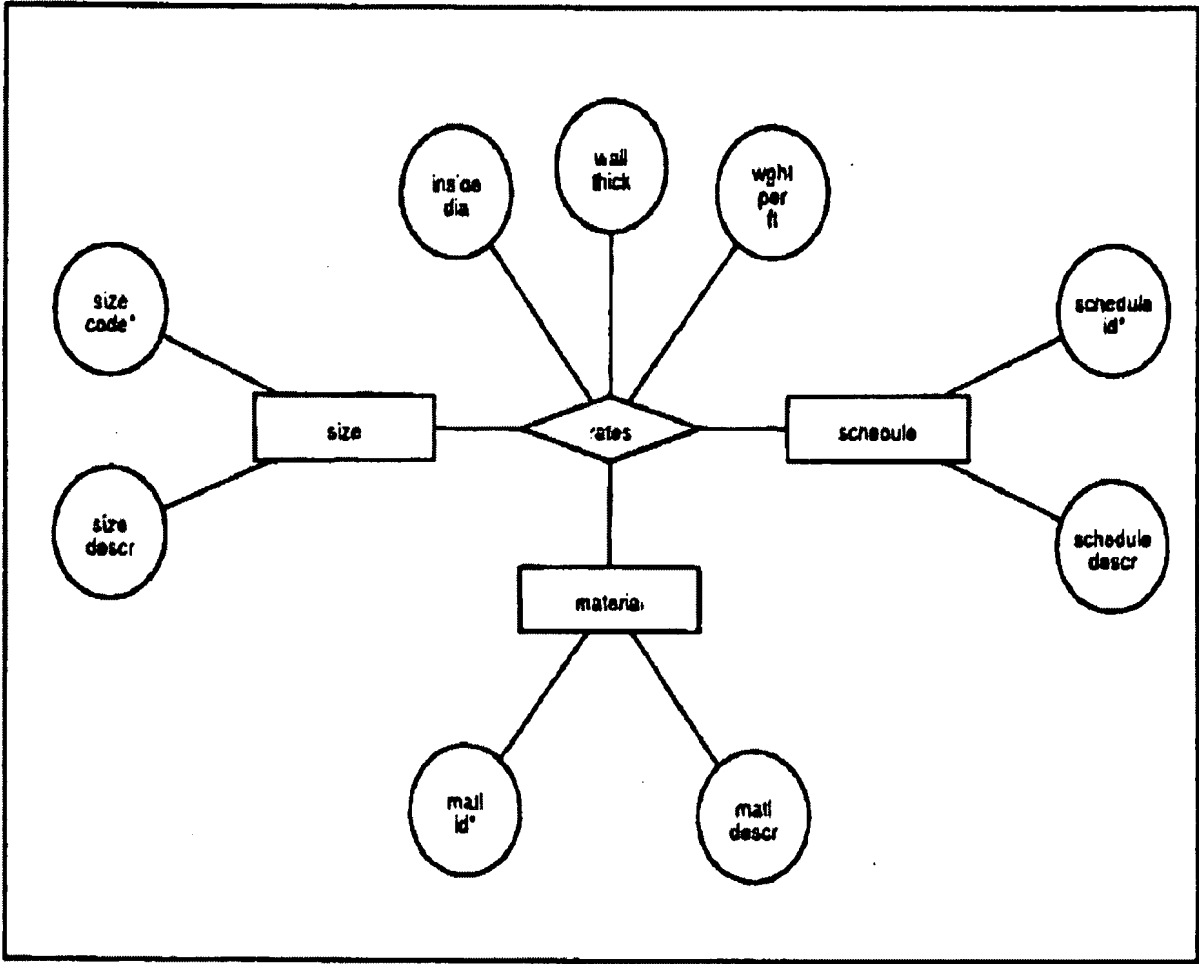


Figure 1 — An Entity Relationship Diagram for Pipe Rating

Art Unit: 3623

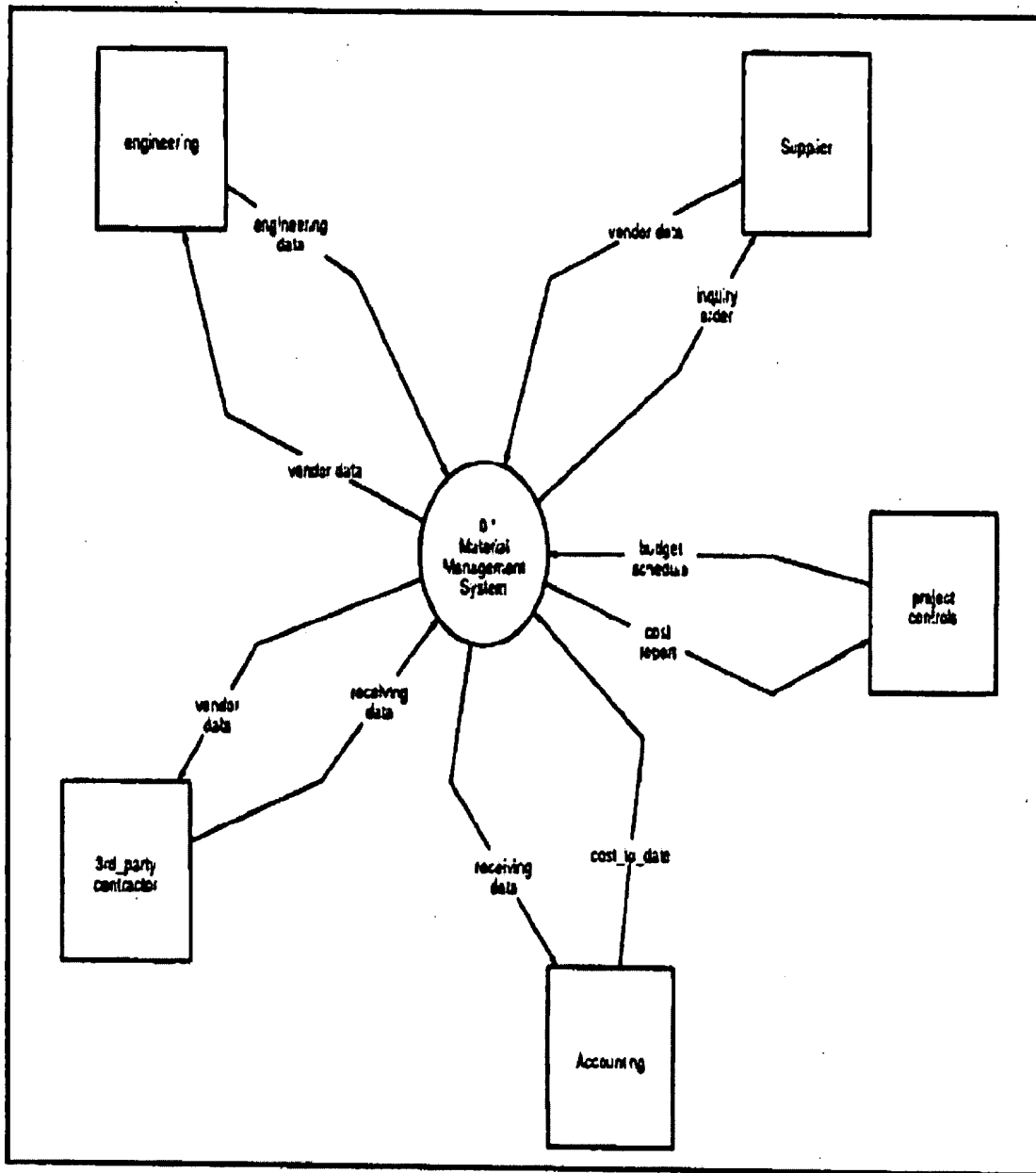


Figure 2 -- A Top-Level Data Flow Diagram

Art Unit: 3623

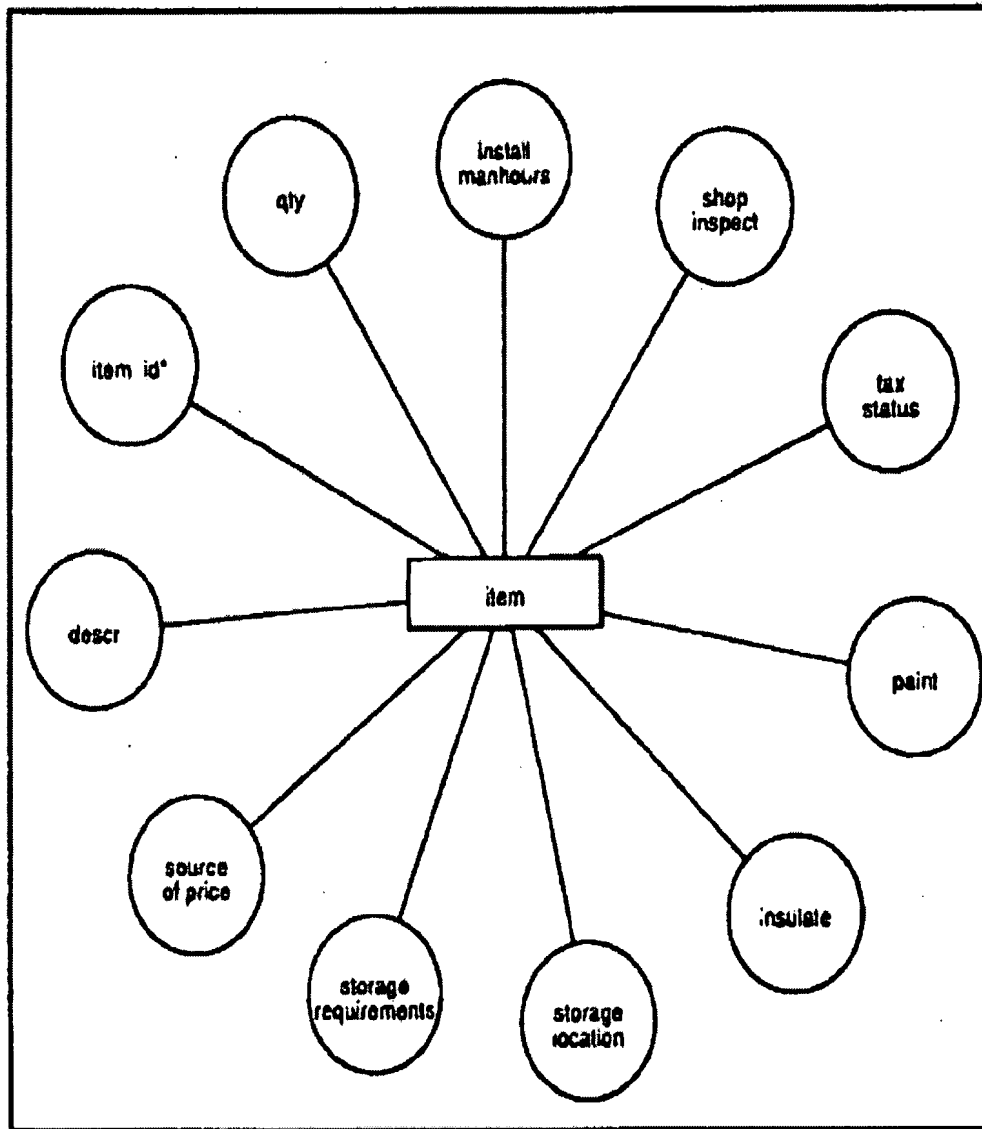


Figure 6 -- An Entity Relationship Diagram for Item

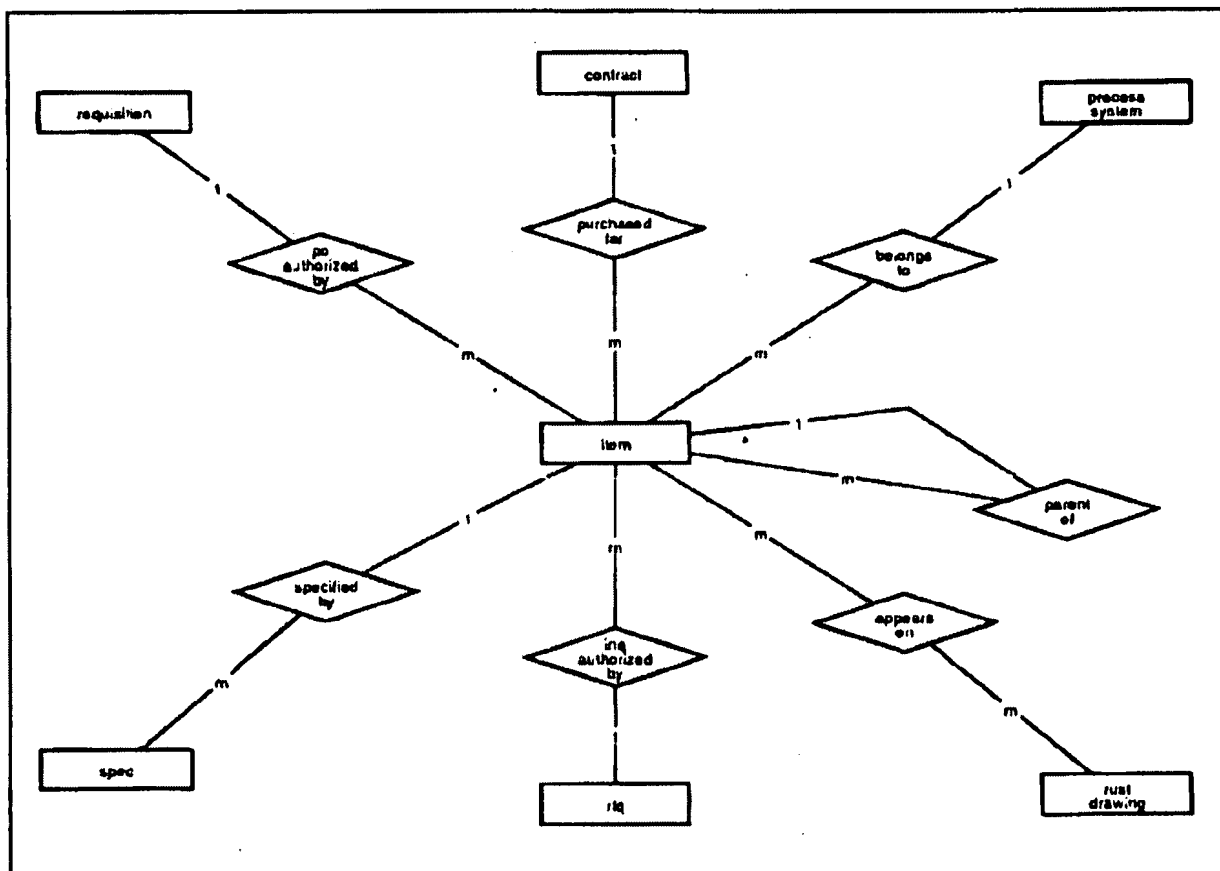


Figure 7 — An Entity Relationship Diagram that Depicts Relationships of Item

It is noted that the specific data structure (database schema, entity relationship, tables, etc.) claimed merely represent non-functional descriptive material wherein the specific data structure used to realize the forecasting tool does not effect the functionality of the system/method as claimed wherein any of a plurality of specific data structures comprising the same/substantially similar data elements would function in a substantial similar manner and produce the same result, i.e. a forecast/prediction of the materials needed for a project. Thus, this descriptive material will not distinguish the

claimed invention from the prior art in terms of patentability, *see In re Gulack*, 703 F.2d 1381, 1385, 217 USPQ 401, 404 (Fed. Cir. 1983); *In re Lowry*, 32 F.3d 1579, 32 USPQ2d 1031 (Fed. Cir. 1994); MPEP 2106.

Puckett et al. does not expressly teach a project-type table having project-type information for each project referenced by the table, the project type information including an identification of a project type, each item to be employed in connection with the project type as claimed.

Berka teaches a project-type table having project-type information for each project referenced by the table, the project type information including an identification of a project type, each item to be employed in connection with the project type (pick lists; Column 2, Last Two Paragraphs, Page 2; Column 2, Paragraph 2, Page 3) in an analogous art of materials management for the purposes of enabling users to save and reuse common project items (Column 2, Paragraph 2, Page 3).

More generally Berka teaches a typical materials management system and method comprising a plurality of project information including but not limited to projects, items needed, milestone dates, item order dates, project bill of materials, item specific/supplier specific lead times, supplier information, contract terms, and the like as well as an output (graphical user interface) for providing the plurality of project information to personnel wishing to view such information (Column 2, Paragraphs 1-3,

Art Unit: 3623

Last Two Paragraphs, Page 2; Column 1, Last Two Paragraphs, Page 3; Column 2, Paragraphs 1-3, Page 4).

Berka further teaches that the materials management system is distributed amongst/between a plurality of systems/locations (Column 2, Last Paragraph, Page 2)

XXX	XXX	XX XX
		Labor task or material package number
		Labor or material discipline
		Labor or material type
	Work package number	
Project number		

It would have been obvious to one skilled in the art at the time of the invention that the system and method for forecasting item requirements for a project (forecasting tool for determining/predicting item requirements in terms of quantities, timing, etc.) as taught by Puckett et al. would have benefited from a project-type table having project-type information for each project referenced by the table, the project type information including an identification of a project type, each item to be employed in connection with the project type as taught by Berka et al.; the resultant system/method enabling personnel to save and reuse common project items (Berka et al.: Column 2, Paragraph 2, Page 3).

While the utilization of project management and/or materials management methods are well known in the telecommunications industry neither Puckett et al. nor Berka et al. expressly teach that the intended use of the materials management system and method is limited to only telecommunications installation projects as claimed.

Official notice is taken that the utilization of project management and/or materials management techniques for installation projects in the communications industry is well known and a common business practice wherein project management and materials management enable firms in the communication industry to manage and control large scale projects such as the installation of communication networks/services.

Support for this officially noticed fact can be found in at least the following reference: Imam, Project Management in Telecommunications (1990).

It is noted that the project management and materials management systems and methods disclosed by Puckett et al. and Berka et al. are applicable to any of a plurality of industries and/or project types and are capable of providing well known materials management techniques to forecasting items needed for a telecommunications installation project.

That the materials management system/method is limited to telecommunications installation projects does not change the overall functionality or structure of the system. The intended use must result in a manipulative difference as compared to the prior art. See *In re Casey*, 152 USPQ 235 (CCPA 1967) and *In re Otto*, 136 USPQ 458, 459 (CCPA 1963).

Further it is noted that the intended use of the forecasting system/method merely represents non-functional descriptive material wherein the systems intended field of use is not functionally involved in the steps recited nor do they alter the recited structural

elements. The recited method steps would be performed the same regardless of the workload system/method's intended field of use. Further, the structural elements remain the same regardless of the workload system/method's intended field of use. Thus, this descriptive material will not distinguish the claimed invention from the prior art in terms of patentability, see *In re Gulack*, 703 F.2d 1381, 1385, 217 USPQ 401, 404 (Fed. Cir. 1983); *In re Lowry*, 32 F.3d 1579, 32 USPQ2d 1031 (Fed. Cir. 1994); *MPEP* 2106.

Regarding Claim 2 Puckett et al. teach a material management system and method wherein the items include at least one of the following (selected from the group consisting of): parts, materials, equipment, labor, time or combinations thereof (Column 1, Paragraph 1, Page 1; Figures 1-7; Table 1).

Regarding Claims 3-4 Puckett et al. teach a material management system and method wherein system is distributed over a company (i.e. company wide) and includes a database service for controlling and coordinating the database (Column 1, Paragraph 2, Page 1; Column 1, Paragraph 4, Page 2; Column 2, Paragraph 2, Page 2; Column 1; Figures 1, 6-7).

Berka et al. teach a distributed materials management system and method as discussed above.

Puckett et al. is silent as to the architecture of the database management system and specifically does not expressly teach that the *databases* are distributed across several computers as claimed.

Official notice is taken that the utilization of distributed databases (distributed database management systems, client/server, etc.) is old and very well known wherein distributed databases provide a plurality of benefits/advances including at least transparency (distribution/network, replication, fragmentation), increased reliability and availability or improve performance (Elmasri et al. Chapter 24.1.2 Advantages of Distributed Databases, Pages 767, 769-770). Support for this officially noticed fact can be found in at least the following reference: Elmasri et al., Fundamentals of Database Systems (2000): Chapter 24 Distributed Databases and Client Server Architecture (Pages 765-795).

It would have been obvious to one skilled in the art at the time of the invention that the system and method for materials management as taught by the combination of Puckett et al. and Berka et al. with their utilization of well known database management systems would have benefited from utilizing any of a plurality of well known database architectures/structures/designs including but not limited to distributed databases in view of the teachings of official notice; the resultant system/method providing transparency and/or improved reliability and availability.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- Sellers et al., U.S. Patent No. 5,311,438, teach system and method for forecasting materials/items required for a project.
- Lu et al., U.S. Patent No. 5,450,317, teach a materials forecasting, planning and order system and method for determining the items required for a project and the timing required for ordering the items to meet key project dates.
- Aquilano et al., A formula set of algorithms for project scheduling with critical path scheduling/materials requirement planning (1980), teach a system and method (forecasting tool) for predicting future demand for quantifiable items with a plurality of projects wherein the system/method determined materials requirement information including material quantities, suppliers and order lead times in order to meet key project dates/milestones.
- Smith, A Combined Critical Path Method – Materials Requirements Planning Model for Project Scheduling Subject to Resource Constraints (1980), teach a system and method for forecasting demand and ordering project items to meet key project dates.
- Dwight, Constrained Resource Project Scheduling Subject to Material Constraints (1984), teaches a system and method for avoiding project item shortages by integrating well known project and materials planning/management techniques to determine (predict) items required for project tasks/activities.

Art Unit: 3623

- Marsh, Materials Management: Practical Application in the Construction Industry (1985), teaches the well known utilization of materials management systems and methods to predict future requirements for project items (materials management coordination plan) as well as ordering/acquiring project items based on a project schedule.

- Smith-Daniels, Optimal Project Scheduling With Materials Ordering (1987), teach a system and method for optimizing project activities and materials orders.

- Shtub, The Integration of CPM and Material Management in Project Management, teaches a system and method for predicting future demand for quantifiable project items in connection with a plurality of projects as well as integrating the acquisition of required project items in order to meet key project dates.

Shtub further teaches that the forecasting tool comprises a plurality of tables, a database, capacity constraints, project work breakdown structures, supplier/item lead times and project bill of materials.

Art Unit: 3623

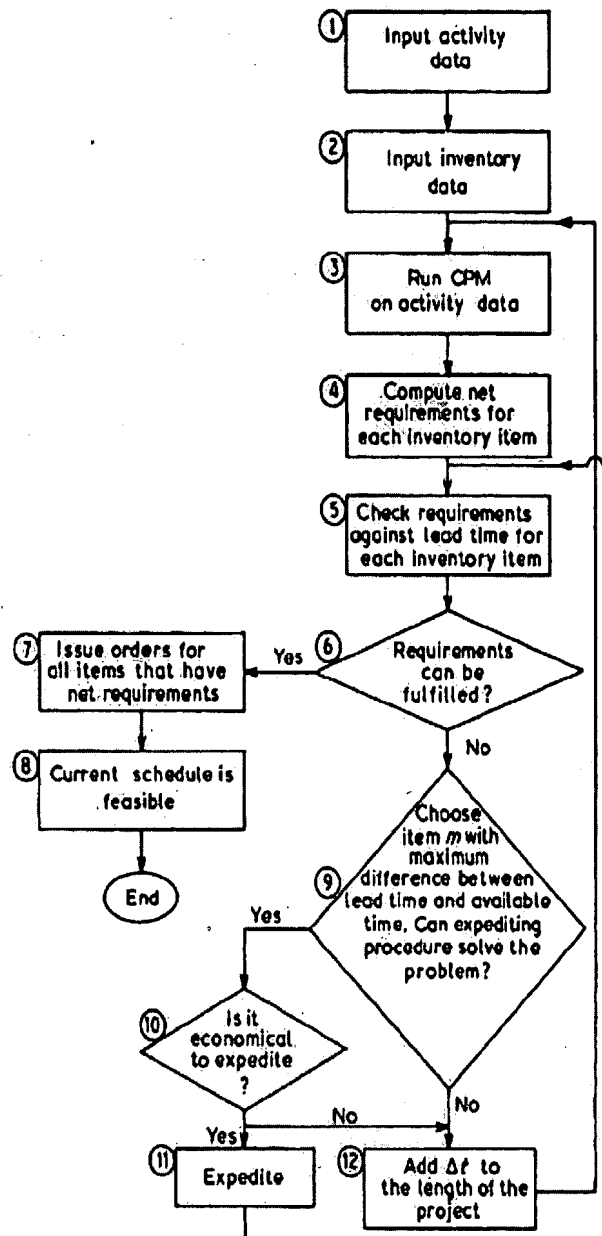


Fig. 1. Flow chart of CPM/material management procedure.

Art Unit: 3623

Table 2. Inventory file for hospital addition project

Part number	Description	On hand	On order	Nominal lead time	Minimum lead time	Cost to expedite an order (\$/month)	Activity needed for
1	Concrete	0	0	1	0	1000	1,4,8
2	Steel	0	0	3	2	3000	2
3	Pipes	0	0	2	1	5000	5
4	Electrical hardware	0	0	2	1	2000	6
5	Heaters	0	0	6	5	1000	7
6	Air conditioners	0	0	5	3	1000	7
7	Wallpaper	0	0	2	2	—	9
8	Interior hardware	0	0	5	4	1000	9
9	Equipment and furniture	0	0	6	4	3000	10

Table 3. Material requirements for project length of 17 months

Month	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
<i>Material</i>																	
Concrete	5 tons						3 tons			5 tons							
Steel		3 tons															
Pipes										1 set							
Electrical hardware										1 set							
Heaters										100 units							
Air conditioners										100 units							
Wallpaper											1000 sq. ft						
Interior hardware											100 sets						
Equipment and furniture															100 sets		

Art Unit: 3623

Table 4: Orders schedule

Month	-2	-1	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Material																			
Concrete		5 tons							3 tons			5 tons							
Steel		3 tons																	
Pipes																			
Electrical hardware										1 set									
Heaters											1 set								
Air conditioners								100 units											
Wallpaper								100 units											
Interior hardware													1000 sq. ft.						
Equipment and furniture											100 sets								
												100 sets							

- Bragg, Material requirements planning and purchasing (1989), teaches the well known business practice of employing MRP systems/methods for providing "the right materials, at the right price, at the right time."

- Akintoye, Just-in-Time application and implementation for building material management (1995), teach an item forecasting ordering tool (system/method) for predicting future demand of project items and ordering the appropriate number and type of project items to meet the needs of a project schedule.

- Graham, CostTrack (2000), teaches a system and method for materials management for multiple projects comprising supplier information (lead-time requirements), project information (milestones, required item dates), and materials procurement.

- Clough et al., Construction Project Management (2000), teaches a plurality of well known project management techniques/methods including project scheduling and resource management wherein resource management includes determining the type, quantity and timing of resources (labor, items, materials, supplies, equipment, etc.) for construction projects.


- Krajewski et al., Operations Management (1996), teach the well known/traditional/typical use of materials requirement planning for predicting the needs for project items.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Scott L. Jarrett whose telephone number is (571) 272-7033. The examiner can normally be reached on Monday-Friday, 8:00AM - 5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hafiz Tariq can be reached on (571) 272-6729. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 3623

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Scott Jarrett
Asst. Examiner
October 26, 2007